

Academic and Government Research

Round 1

8/31/2006

Item Designation	Title	Author	School/Area	Date
Bedding, Bed Linens, and Towels	Evaluation of performance characteristics of hemp fabrics when home-dyed with fiber reactive dyes	Armitage, C.P.	California State University	2004
	Production of textiles from soy proteins	Huang, H.-C.	Iowa State University	
	Antibacterial finishing of cellulosic clothing materials	Xu, X.	University of California	2002
	Biobased Fiber Production: Enzyme Retting for Flax/Linen Fibers	Akin, D.E., D.S. Himmelsbach, and W.H. Morrison	Russell Research Center	2000
Diesel Fuel Additives	Degradacion de biodiesel y diversidad bacteriana en suelos arenosos de una zona industrial	Barraza Cabarcas, R.E.	University of Puerto Rico, Mayaguez (Puerto Rico)	2006
	A novel application of ozone chemistry for biodiesel improvement: Product development and characterization	Baber, T.M.	Michigan State University	2005
	Estudio del comportamiento de una burbuja dentro del proceso de produccion de biodiesel mediante mezclado ultrasonico	Beltran Sampayo, C.J.	University of Puerto Rico, Mayaguez (Puerto Rico)	2005
	Modelo de simulacion y visualizacion del proceso de mezclado ultrasonico para la produccion de biodiesel	De La Torre Quintana, L.F.	University of Puerto Rico, Mayaguez (Puerto Rico)	2005
	Biodiesel production from canola oil using a membrane reactor	Liu, J.	University of Ottawa (Canada)	2005
	Effect of fuel formulation on soot properties and regeneration of diesel particulate filters	Song, J.	Pennsylvania State University	2005
	Hydrogen and chemicals from fossil and renewable fuels by autothermal reforming	Subramanian, R.	University of Minnesota	2005
	Measurement of the physical properties of biodiesel fuels at temperatures up to 300 deg. C	Tate, R.E.	Dalhousie University (Canada)	2005
	Computational modeling of nitrogen oxide emissions from biodiesel combustion based on accurate fuel properties	Yuan, W.	University of Illinois	2005
	Effects of the use of ultrasonic waves on biodiesel production in alkaline transesterification of bleached tallow and vegetable oils: Cavitation model	Alape Benitez, F.	University of Puerto Rico, Mayaguez (Puerto Rico)	2004
	Biodiesel synthesis and impact of cold flow additives	Chiu, C.-W.	University of Missouri	2004
	Parameter optimization of the transesterification reaction for the production of ethyl ester biodiesel	Hiibel, S.R.	University of Nevada	2004
	Opportunities and barriers for a crop-based energy sector in Ontario	Klupfel, E.J.	University of Guelph (Canada)	2004

Separation techniques using temperature gradient and their application in biodiesel production	Shah, P.S.	University of Missouri	2004
Optimization of a two-step process for the production of ASTM-standard biodiesel from refurbished oils and fats	Baig, A.	University of Toronto (Canada)	2003
Biodiesel raw material supply: Alcohol	Berrios Diaz, Z.M.	University of Puerto Rico, Mayaguez (Puerto Rico)	2003
The performance of biodiesel in in-service motor vehicles in Hong Kong	Cheng, W.-K.	University of Hong Kong (People's Republic of China)	2003
Development of a biofuel blend using soybean methyl ester as the amphiphile in an ethanol-biodiesel-diesel microemulsion: EB-diesel	Fernando, S.D.	University of Nebraska	2003
Numerical simulations of a compression ignition engine using biodiesel fuels	Purohit, C.	Lamar University	2003
Investigation of oxides of nitrogen emissions from biodiesel-fueled engines	Tat, M.E.	Iowa State University	2003
Biodiesel production from waste frying oil: Conversion monitoring and modeling	Zheng, S.	University of Ottawa (Canada)	2003
Optimization studies for the alkaline transesterification biodiesel reaction using ultrasound mixing	Borrero Quintana, E.E.	University of Puerto Rico, Mayaguez (Puerto Rico)	2002
Design and economic assessment of biodiesel production from waste cooking oil	Zhang, Y.	University of Ottawa (Canada)	2002
Production of biodiesel from feedstocks with high fatty acids and its effect on diesel engine performance and emissions	Canakci, M.	Iowa State University	2001
Production of sunflower oil ethyl ester for use as a biodiesel fuel	Zhou, W.	University of Toronto (Canada)	2000
Biodiesel fuel: The transesterification of beef tallow	Ma, F.	University of Nebraska	1999
Prediction of biodiesel fuel atomization characteristics based on measured properties	Allen, Cecil A.W.	Daltech-Dalhousie University (Canada)	1998
The effect of biodiesel oxidation on engine performance and emissions	Monyem, A.	Iowa State University	1998
Determination of particulate and unburned hydrocarbon emissions from diesel engines fueled with biodiesel	Chang, Y.-Z.	Iowa State University	1997
The biodegradability of biodiesel in marine and anaerobic fresh water environments (Burkholderia solanacaerum, Pseudomonas putida)	Donofrio, R.S.	Duquesne University	1996
Biodegradability of biodiesel in the aquatic and soil environments	Zhang, X.	University of Idaho	1996

A comparative cost analysis for biodiesel, compressed natural gas, methanol, and diesel fuels for transit bus systems	Ahouissoussi, N.B.	University of Georgia	1995
Beef tallow as a biodiesel fuel	Ali, Y.	University of Nebraska	1995
Biodiesel kinetics: One-phase base-catalyzed methanolysis of soybean oil using tetrahydrofuran as cosolvent	Mao, W.-L.	University of Toronto (Canada)	1995
An analysis of economic and environmental impact of using biodiesel in the Kansas City metropolitan area	Chang, R.-K.	Univeristy of Missouri	1994
Soy Oil for Safe Solvents, Biodiesel Fuel and Soy Biodiesel from Biomass Conversion	Center for Crops Utilization Research	Iowa State University	
Modeling Study on NOx Reduction Strategies for Biodiesel	Kong, S.-C.	Iowa State University	Started in 2006
The move towards Biomass (Renewable) Resources for Production of Materials, Chemicals, and Fuels	Narayan, R.		
Engineering new biodiesel Products	Boes, R.	Michigan State University	
Life cycle assessment of various cropping systems utilized for producing biofuels: Bioethanol and biodiesel	Dale, D.E. and K. Seungdo	Michigan State University	2005
Growing Energy: How Biofuels Can Help End America's Oil Dependence	Dale, D.E. and N. Greene	Michigan State University	2005
Life cycle assessment of various cropping systems utilized for producing biofuels: Bioethanol and biodiesel	Kim, S. and D.E. Dale	Michigan State University	2005
Tallow Biodiesel	Industrial Agricultural Products Center	University of Nebraska	
Novel Catalysts for Biodiesel Production Improvement	Crofcheck, C. and M. Crocker	University of Kentucky	
Analysis of Coconut-Derived Biodiesel and Conventional Diesel Fuel Samples from the Philippines	Allerman, T.L. and R.L. McCormick	National Renewable Energy Laboratory	2006
The Production of Biodiesel Fuel Esters Directly from Lipid-Containing Materials	Haas, M., T. Foglia, A. Mcaloon, and W. Marmer	Eastern Regional Research Center	2005
Direct Production of Biodiesel from Lipid-Bearing Materials, Including Canola	Foglia, T., G. Piazza, V. Wyatt, M. Haas, and W. Marmer	Eastern Regional Research Center	2006
Synthesis and Evaluation of a Series of Oleate Derivatives As Potential Biodiesel Value-Added Products	Moser, B. and S. Erhan	USDA ARS	2006
Metathesis of Vegetable Oil Esters for Improved Fuel Properties	Ehran, S., R. Holser, and K. Doll	USDA ARS	2005

	The Effect of Antioxidant Addition on Nox Emissions from Biodiesel	Hess, M., M. Haas, T. Foglia, and W. Marmer	USDA ARS	2005
	Ethanol–diesel fuel blends — a review	Hansen, A.C., Q. Zhang, and P.W.L. Lyne	University of Illinois and University of Natal	2004
Mobile Equipment Hydraulic Fluids	Environmentally friendly products based on vegetable oils	Lamsa-Ehtonen, M.P.	Teknillinen Korkeakoulu (Finland)	1996
	Environmental stability of high temperature polymeric matrix composites	Papllham, W.P.	University of Washington	1995
	Multi Grade Hydraulic Fluid	Ag-Based Industrial Lubricants	University of Northern Iowa	
	Industrial Hydraulic Fluid	Ag-Based Industrial Lubricants	University of Northern Iowa	
	Food-Grade Hydraulic Fluid	Ag-Based Industrial Lubricants	University of Northern Iowa	
	Soybean-Based Industrial Lubricants	Honary, L.	University of Northern Iowa	
	The biodegradation potential of vegetable-based hydraulic fluid using a miniaturized test method. Resources and Environmental Biology	Rouzic, L.J., T. Mascarenhas, and E.J. Brown	University of Northern Iowa	2000
	Biodegradability and toxicity studies of vegetable-based industrial lubricants and greases	Johnston, P	University of Northern Iowa	
	New lubricants from vegetable oil: cyclic acetals of methyl 9, 10-dihydroxystearate	Filley, J.	Colorado School of Mines	2004
	Vegetable Oil Based Lubricants for Industrial Uses	Erhan, S. and B. Sharma	USDA ARS	2006
	Use of Vegetable Oils in Functional Fluids	Erhan, S., A. Adhvaryu, and Z. Liu	USDA ARS	2002
	Production of Value-Added Lipids, Biofuels, and Biobased Products from Fats and Oils	Foglia, T., G. Piazza, V. Wyatt, M. Haas, and W. Marmer	USDA ARS	
	New and Expanded Uses of Oilseed Products and By-Products	Wan, P., M. Dowd, M. Kuk, and O. Dailey	USDA ARS	
	Synthesis and Characterization of Biobased Lubricant Additives	Sharma, B., J. Perez, and S. Erhan	USDA ARS	2006
	Friction and Wear Behavior of Biobased Lubricant Additives	Sharma, B., J. Perez, and S. Erhan	USDA ARS	2006
	Friction Behavior of Some Seed Oils: Bio-Based Lubricant Applications	Erhan, S., G. Biresaw, A. Adhvaryu, and B. Sharma	USDA ARS	2006
	Vegetable Oil-Based Base Stocks	Erhan, S. and A. Adhvaryu	USDA ARS	2003
	Development of Bio-Based Synthetic Fluids: Application of Molecular Modeling to Structure-Physical Property Relationship	Erhan, S., A. Adhvaryu, B.Sharma, H. S. Hwang, and J. Perez	USDA ARS	2005
	Chemical Modification of Vegetable Oils for Lubricant Applications	Erhan, S., B. Sharma, A. Adhvaryu, and Z. Liu	USDA ARS	2005
	A Study of the Oxidation and Wear Properties of Vegetable Oils: Soybean Oil Without Additives	Erhan, S., W. Castro, J. Perez, and F. Caputo	USDA ARS	2005
	Synthetic Lubricant Basestocks from Epoxidized Soybean Oil and Guerbet Alcohols	Erhan, S. and H. S. Hwang	USDA ARS	2005

Synthesis of Diethylamine Functionalized Soybean Oils	Erhan, S., J. Willett, S. Gordon, A. Biswas, and A. Adhvaryu	USDA ARS	2005
High Oleic Vegetable Oil Based Lubricants	Erhan, S. and B. Sharma	USDA ARS	2005
Natural Oils As Lubricants	Erhan, S. and Rudnick, L.	USDA ARS	2005
Biobased Lubricants: Improvement in Oxidation and Low Temperature Stability	Erhan, S., B. Sharma, and A. Adhvaryu	USDA ARS	2005
Biodegradable Industrial Lubricants	Ehran, S. and B. Sharma	USDA ARS	2005
Environmentally Friendly Biobased Lubricants	Ehran, S. and B. Sharma	USDA ARS	2005
Additive-Additive Interactions in Vegetable Oil: the Search for Synergistic Antioxidant Using Pdsc	Ehran, S., B. Sharma, and A. Adhvaryu	USDA ARS	2005
The Use of Vegetable Oils As Lubricants and Hydraulic Fluids	Ehran, S.	USDA ARS	2004
Industrial Lubricants Based on High Oleic Vegetable Oils	Ehran, S., B. Sharma, and A. Adhvaryu	USDA ARS	2004
Biobased Lubricants for Industrial Applications	Ehran, S., B. Sharma, and A. Adhvaryu	USDA ARS	2004
Seed Oil Based Grease for Industrial Applications	Ehran, S., B. Sharma, and A. Adhvaryu	USDA ARS	2004
Compositional Effects of Biobased Greases on Its Oxidative Stability	Erhan, S., B. Sharma, A. Adhvaryu, and J. Perez	USDA ARS	2004
Industrial Applications of Soybean Oil	Ehran, S.	USDA ARS	2004
Vegetable Oil-Based Lubricants: Improvement in Oxidation and Low Temperature Stability	Ehran, S., B. Sharma, and A. Adhvaryu	USDA ARS	2004
Friction and Oxidation Behavior of Vegetable Oil Derivatives As Lubricants: Substitution Chain Length Effects	Ehran, S., Z. Liu, A. Adhvaryu, and B. Sharma	USDA ARS	2004
Development of Bio-Based Synthetic Fluids: Application of Molecular Modeling	Ehran, S., B. Sharma, and A. Adhvaryu	USDA ARS	2004
Tribochemical Behavior of Bio-Fluids As Lubricants and Industrial Oils	Ehran, S., B. Sharma, and A. Adhvaryu	USDA ARS	2004
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Chemically Functionalized Vegetable Oils	Ehran, S., B. Sharma, and A. Adhvaryu	USDA ARS	2004
Chemical Modification of Vegetable Oils for Lubricant Basestocks	Ehran, S. A. Adhvaryu, and Z. Liu	USDA ARS	2003
Tribological and Oxidation Properties of Chemically Modified Vegetable Oils As Lubricants	Erhan, S., B. Sharma, A. Adhvaryu, and Z. Liu	USDA ARS	2004
Use of Soybean Oil in Functional Fluids	Ehran, S., A. Adhvaryu, and Z. Liu	USDA ARS	2002
Friction Properties of Vegetable Oils	Erhan, S., A. Adhvaryu, and G. Biresaw	USDA ARS	2003
Chemical Modification of Vegetable Oil for Industrial Applications	Erhan, S., A. Adhvaryu, and Z. Liu	USDA ARS	2003

	Lubricant Base Stocks from Modified Soybean Oil	Erhan, S. and H.-S. Hwang	USDA ARS	2003
	Structure Induced Thermo-Oxidative Behavior of Bio-Based Synthetic Lubricants	Erhan, S., A. Adhvaryu, and H.-S. Hwang	USDA ARS	2003
	Synthetic Lubricants from Epoxidized Soybean Oil and 2-Ethylhexyl Alcohol	Erhan, S., A. Adhvaryu, and H.-S. Hwang	USDA ARS	2002
	Use of Vegetable Oils in Functional Fluids	Erhan, S., A. Adhvaryu, and Z. Liu	USDA ARS	2002
	A status report on promoting the use of biobased lubricants made of commodity and enhanced vegetable oils	Honary, L.	University of Northern Iowa	2002
	Boundary lubrication properties of lipid-based compounds evaluated using microtribological methods	Bhuyan, S., S. Sundararajan, L. Yao, E.G. Hammond, and T. Wang	Iowa State University	2006
Penetrating Lubricants	Vegetable Fats and Oils in Paints and Coatings	Center for Crops Utilization Research	Iowa State University	
	Crambe Used as a Lubricant	Center for Crops Utilization Research	Iowa State University	
	Soy-Oil-Refining Technologies	Center for Crops Utilization Research	Iowa State University	
	Soybean Utilization Research	Center for Crops Utilization Research	Iowa State University	
	Development of Soybean-Based Biorenewable Source of Fuels and Lubricants	Nikolau, B.J., E.S. Wurtele, D. Nettleton, J.V. Shanks, M. Westgate, E.G. Hammond, T. Wang, S. Sundararajan, and D. Hayes	Iowa State University	
	Thermally Stable Vegetable Oil based Lubricants via Reductive Ozonolysis	Vickray, R.	Michigan State University	2004
	Soybean-Based Industrial Lubricants	Honary, L.	University of Northern Iowa	
	Biodegradability and toxicity studies of vegetable-based industrial lubricants and greases	Johnston, P	University of Northern Iowa	
		Ag-Based Industrial Lubricants	University of Northern Iowa	
	Development of industrial uses for animal fats and vegetable oils, including lubricants	Industrial Agricultural Products Center	University of Nebraska	
	New lubricants from vegetable oil: cyclic acetals of methyl 9, 10-dihydroxystearate	Filley, J.	Colorado School of Mines	2004
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	Use of Vegetable Oils in Functional Fluids	Erhan, S., A. Adhvaryu, and Z. Liu	USDA ARS	2002
	The Effects of Microwave Irradiation on the Structure, Viscosity, Thermal Properties and Lubricity of Soybean Oil	Biswas, A., A. Adhvaryu, D. Stevenson, B. Sharma, J. Willett, and S. Erhan	USDA ARS	2006
	Investigation of the Mechanism of Lubrication by Starch-Oil Composite Dry Film Lubricants	Biresaw, G., J. Kenar, T. Kurth, F. Felker, and S. Erhan	USDA ARS	2006
	Lubricant Formulation with Vegetable Oils - Interfacial Aspects	Biresaw, G.	USDA ARS	2004
	A status report on promoting the use of biobased lubricants made of commodity and enhanced vegetable oils	Honary, L.	University of Northern Iowa	2002
	Boundary lubrication properties of lipid-based compounds evaluated using microtribological methods	Bhuyan, S., S. Sundararajan, L. Yao, E.G. Hammond, and T. Wang	Iowa State University	2006
Roof Coatings	Vegetable Fats and Oils in Paints and Coatings	Center for Crops Utilization Research	Iowa State University	
	Patent: Chitin-based Coatings	Glasser, W.G., G. Samaranayake, and A. Toffey	Virginia Polytechnic Institute and State University	
		Bailey, C.A.	Cooperative State Research, Education & Extension Service	
		Kaempf, D.	Biomass Research & Development Initiative	

Water Tank Coatings	Use of vegetable oil and derivatives as reactive diluents in high-solid and waterborne coatings	Coating Research Institute	Eastern Michigan University	
	Development of new industrial uses for proteins found in soybeans, such as coatings made from the proteins in these commodities	Industrial Agricultural Products Center	University of Nebraska	
	Vegetable Fats and Oils in Paints and Coatings	Center for Crops Utilization Research	Iowa State University	
	Patent: Chitin-based Coatings	Glasser, W.G., G. Samaranayake, and A. Toffey	Virginia Polytechnic Institute and State University	
		Bailey, C.A.	Cooperative State Research, Education & Extension Service	
		Kaempf, D.	Biomass Research & Development Initiative	
	Use of vegetable oil and derivatives as reactive diluents in high-solid and waterborne coatings	Coating Research Institute	Eastern Michigan University	
	Development of new industrial uses for proteins found in soybeans, such as coatings made from the proteins in these commodities	Industrial Agricultural Products Center	University of Nebraska	